55. (Amended) A method according to claim 50, wherein reiterated computation of said matrix balanced position within said time sequence is made during ongoing measurements taken over a measurement period.

56. (Amended) A method according to claim 50, wherein a new matrix balanced position is computed for each time sequence in a consecutive series of said time sequences during ongoing measurements taken over a measurement period.

57. (Amended) A method according to claim 55, wherein said reiterated updating is made in a time range of every 5-15 seconds.

58. (Amended) A method according to claim 50, wherein balanced position of numbers of occurrences in said first or second matrix is presented as numerical values or as weighted values.

63. (Amended) A method according to claim 58, wherein differences or relationships between any of the single pressure wave related digital pressure data stored in said database are analyzed statistically.

64. (Amended) A method according to claim 59, wherein said statistical analysis includes plotting of differences of values of

said single wave parameters between different pressures with identical time sequence and identical time reference.

69. (Amended) A method according to claim 62, wherein said statistical analysis includes plotting of single wave parameters in scatter plots wherein each axis refers to one or said single pressure wave parameters.

70. (Amended) A method according to claim 59, wherein absolute mean pressure during said time sequence is related to balanced position of amplitude (ΔP) during said identical time sequence.

71. (Amended) A method according to claim 59, wherein absolute mean pressure during said time sequence is related to balanced position of latency (ΔT) during said identical time sequence.

73. (Amended) A method according to claim 63, wherein a best fitted curve or equation is established for any relationships of said single pressure wave related parameters.

75. (Amended) A method according to claim 1, wherein a best fitted curve or equation is made on the basis of individual pressure recordings, said individual pressure recording built up of a continuous series of said time sequences.

76. (Amended) A method according to claim 1, wherein a total best fitted curve or equation is made on the basis of two or more of said individual pressure recordings.

78. (Amended) A method according to claim 74, wherein said individual pressure recordings are included in determining said total best fitted curve or equation according to selectable criteria, said selectable criteria related to distribution of single pressure wave related parameters within said individual pressure recording.

79. (Amended) A method according to claim 1, wherein best fitted equations for different single pressure wave parameter relationships are combined.

81. (Amended) A method according to claim 1, wherein mean pressure for said individual time sequence is determined as a function of balanced position of amplitude and latency within said identical time sequence.

86. (Amended) A method according to claim 83, wherein matrix cells are given a value represented as a function of parameters of the matrix columns and rows.

87. (Amended) A method according to claim 83, wherein all matrix cells of an amplitude (ΔP)/latency (ΔT) matrix are represented by mean pressure values, said mean pressure values being a function of balanced positions of amplitude (ΔP) and latency (ΔT) values, said mean pressure values termed predicted mean pressure.

88. (Amended) A method according to claim 83, wherein matrix cells of an amplitude (ΔP)/latency (ΔT) matrix are represented by selected colors corresponding to the mean pressure values of said matrix cells.

89. (Amended) A method according to claim 83, wherein the two-dimensional balanced position of amplitude (ΔP) and latency (ΔT) within a given time sequence is represented by a one-dimensional weight scale number).

92. (Amended) A method according to claim 55, further wherein reiterated updates of balanced positions of amplitude and latency combinations as weight numbers during said time sequence are presented as weighted values and presented in a histogram.

103. (Amended) A method according to claim 101, wherein said sensor-regulating device modifies the mode by which the sensor is able to sample signals indicative of pressure.

104. (Amended) A method according to claim 94, wherein there is feedback between a processing unit performing single pressure wave analysis controlling a deliverable first control signal to regulator, and a regulator controlling a deliverable second control signal to a sensor-relating device, said feedback signal being reiterable at selected intervals during an ongoing pressure measurement.

108. (Amended) A method according to claim 94, wherein the deliverable first and second control signals relate to output of said single pressure wave analysis indicative of optimum single pressure wave detection, said first and second signals being used during the subsequent pressure monitoring.